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THE GENESEE FARMER.

SATURDAY, NOV. 29, 1834.

On a Rotation of Crops.

We have been apprehensive that the importance of a proper rotation of crops was too little understood or attended to, by many of our farmers. The rich calcareous lands of the Genesee Country, are well calculated indeed, to make them forgetful of the subject; and so long as *good* crops of wheat can be produced in annual succession on the same field, there is a danger that they will be satisfied without inquiring if their lands might not be made to yield *better?* We believe that on this point there is much room for improvement.

To sow wheat on wheat stubble has been considered a slovenly practice. It is decidedly so, in the way that it is frequently managed, when all the chess and cockle of the former crop, are allowed to occupy the ground; but this cause of reproach may be avoided by extirpating those weeds; and then if the field be well seeded with clover in the spring, so that a good turf may be ploughed under after harvest, and *kept under* thro' seeding time, we are persuaded the objection to this mode of farming would become *less* valid.

It is not the method however, which we would *fully* recommend. Even in soils that are kept in the best order, there is much testimony to prove that the whole strength of the land is not given out, *where the same crop is annually repeated.* Judge BUEL says, "Without due reflection, I adopted this too common practice, and had my onion quarter, beet quarter, melon quarter, &c. which have been planted with those vegetables almost exclusively for eight or ten years. Notwithstanding I manured highly, I was astonished that *my crops every year grew worse,* till from this very inferior quality, I was led to reflect upon the cause; and the consequence was that I became convinced that the principle of alternation, which I knew was beneficial in farm operation, should be applied also to the garden. I planted my onions, beets, carrots, &c. on new ground, although the [onions] I had understood, should always be continued on the same plat. The result of the change is, that *these vegetables have nearly quadrupled in product.*"

None of these vegetables however, will come under the denomination of EXHAUSTING CROPS, (including wheat, oats, and flax); and therefore we shall be prepared to assent to the following remarks, selected from the British Farmers' Cyclopœdia:

"The proper cropping of arable land is *a matter of the utmost importance* to the interests of the farmer; as upon it in a great measure, must depend the profits and advantages which he is to derive from his labor and industry. It is thought by Mr. Billingsley to be *the most prominent feature in good farming;* and that by which *the product of the soil may be increased in a threefold proportion:* and by Mr. Middleton as one of the most important subjects that can occupy the attention, or exercise the ingenuity and skill of the agriculturist.

"That it demands much regard of the cultivator, is fully evinced by the great advantages that have been gained by it within the last twenty or thirty years,* since its principles have become more perfectly understood, and more extensively applied. It has indeed, been well remarked that *wherever very good or very bad husbandry is found on arable land, it results more from the right or wrong arrangement of crops than from any other circumstance;* and that *no district is well cultivated under bad rotation,* while *it is exceeding rare to see any badly managed under good ones.*"

It is not our intention at this time to inquire whether the deterioration proceeds from excrementitious matter ejected by the plants into the soil? or from a diminution of their food? Neither shall we attempt to determine whether the advantages of rotation, arise from each different crop requiring a different specific food? or whether each only draws its nourishment from a different depth? It will be sufficient for our purpose to exhibit some general principles which have been proposed as guides in this matter to the agricultural inquirer; and which we copy from an excellent essay on the subject by J. HAMILTON COUPER of Georgia:

"FIRST PRINCIPLE. In the selection of crops, to consult the climate, soil, situation, the demand resulting from markets, and the other circumstances which constitute the peculiarities of local position.

"SECOND PRINCIPLE. Plants possessing a system of *broad leaves,* are to be alternated with those having *narrow leaves.*

"THIRD PRINCIPLE. *Fibrous rooted,* are to be alternated with *tap* and *tuberous rooted* vegetables.

"FOURTH PRINCIPLE. The recurrence of the same plant on the same field, or of plants of the same character,—is to be *removed as far as possible.* And their return should be so much the longer delayed, as they have the longer occupied the soil.

"FIFTH PRINCIPLE. Plants which during their growth require the operations of stirring the earth and weeding, to be alternated with those which do not.

"SIXTH PRINCIPLE. The application of manure to be made to the most valuable and exhausting crops, as far as may be consistent with the preceding principle.

"SEVENTH PRINCIPLE. The succession of crops should be so arranged that the work which they require shall follow in easy, regular and economical order.

"EIGHTH PRINCIPLE. Land should be left bare as short a time as possible; and should be kept covered with plants valuable in themselves, or which contribute to the increased value of those which are to follow."

* This work was published in the year 1807.

On Kiln-drying Flour.

At an early period of the manufacture of Indian Corn, it was found necessary to kiln-dry it before it was ground into meal and packed in hogsheads for exportation. This process however, was not considered suitable for wheat, as the *toughness* of the bran was a desirable property; and though great losses had been sustained in consequence of the flour in hot humid climates becoming sour, yet no effectual remedy had been provided. It is therefore with pleasure that we select from the Baltimore Gazette the following account of a new invention which has completely obviated these difficulties.

"We have experienced much gratification through the politeness of our enterprising fellow citizen NATHAN TYSON, Esq. in a visit which we have made to Laurel Mills, of which that gentleman is the proprietor,—with the view of examining an improvement which he has adopted in the mode of kiln-drying wheat flour. We have derived so much pleasure from the investigation of this important subject, that we have determined to direct the attention of our readers to it, and we offer no apology for the length of our remarks, believing that our mercantile friends, to whom the subject cannot fail to be interesting, will be gratified with an account of it, however imperfect it may be.

"The apparatus consists of an arched brick chamber, containing two furnaces for burning anthracite; and two capacious cylinders of tin placed diagonally, through which the flour when manufactured passes at a temperature of about 220 degrees [212 being the heat of boiling water.] The flour thus losing a large portion of its moisture, is then conveyed into the packing room; and when cooled packed for transportation.

"Notwithstanding the simplicity of this fixture, and the obvious improvement it makes in the keeping properties of the flour, it is somewhat singular, when every one who has reflected on this subject has admitted the necessity of some such contrivance, that it should not have been put in operation earlier. The present is the result of a series of experiments made by Mr. Tyson; and we are happy to say, has so fully answered his expectations as to induce him to obtain a patent for its construction.

"To the western country this improvement is of incalculable value; and will render it the granary of North America. With one of these simple fixtures, which can be attached at small expense to any flour mill in the country, the millers of western Pennsylvania and Ohio will be able to count with certainty upon their flour arriving at New Orleans as sweet as when first made; and to insure its safety for an indefinite period of time in any climate.

"As we examined the noiseless movement of this efficient machine, and the clouds of vapor passing from it, we were forcibly impressed with a sense of its importance to the whole country; that

in usefulness it will compare with the cotton gin of Whitney, or the spinning jenny of Arkwright; and that it will give a stability to the business on the Western Waters which they could never have otherwise attained.

"It has been ascertained by experiment that flour manufactured in this manner has remained in Gibraltar two years perfectly sweet; that the unfavorable climate of Liberia has produced no impression upon it, proving sweet after remaining in store for upwards of twelve months; and that the same results have been ascertained in the West India Islands. Several cargoes have been shipped round Cape Horn, some parts of which have returned, and have been found in as good order as when first manufactured; and wherever the experiment has been tried, it has proved entirely successful, and ☞*the flour produced* $1,50 *more than the flour of any other brand.*

"We cannot give a stronger evidence of the utility of this apparatus, and the rich harvest which the proprietor will realise from his discovery, than the opinion of one of our most respected and extensive merchants, whose judgment upon this subject will have great influence, not only here but abroad, and with whose certificate we close our remarks.

"I do hereby certify that I have purchased from time to time a considerable quantity of *dried flour*, which I shipped to the West Indies and South America—say Brazils and round Cape Horn. That in every instance this flour kept perfectly sweet, and that I believe it would keep sweet for years in almost any climate.

Signed WM. PATTERSON."

Baltimore, February 15th, 1834.

For the Genesee Farmer.

Columbian Straw Cutter.

MR. TUCKER—As you labor for the public I wish to inquire whether the "Columbian Straw Cutter," noticed in the 14th number of the current volume of the Farmer, and recommended as a valuable improvement has been used in Rochester or its vicinity?—whether it has answered expectation?—where they may now be had?—at what price?—and how they may be transported?

An answer to these inquiries will confer a favor on one, and perhaps many, of your subscribers. W. T. C.

Bristol, November 18th, 1834.

Not having seen or heard any thing of this Machine, since it was exhibited here last spring, we are unable to give an answer to the above; and would thank any one, possessing the requisite knowledge, to furnish a reply.

Harvesting Machines.

At page 154 of the current volume of the Farmer, we published a communication from Wm. C. Dwight, esq. of Moscow, describing a machine invented by Mr. Hussey of Cincinnati, for reaping wheat and other grain. Mr. D. concluded with a promise that we should hear farther on the subject when it had been tried. His promise has been fulfilled, and we shall publish his letter next week.

☞In answer to the inquiry of our friend at Columbus, Ohio, we would state that Fruit Trees, &c., may be safely sent from this place, or from Albany or N. York, by the Canals and Lake to almost any part of Ohio, in the autumn, if orders are given in season, say by the middle of October. It is possible also that they might be safely sent in the spring, but the uncertainty of the opening of navigation would prevent us from placing much dependance on spring orders.

☞We welcome several of our old correspondents again to our columns. We thank Mr. BRADLEY for his appeal to them and others, published in our last number, and doubt not it will be the means of enlisting many new writers for the Genesee Farmer. We are pleased with the intimation of *Holkham*, that he will furnish further contributions, and hope we may hear frequently from him.

From the Providence Journal.

Manufacture of Silk.

Yesterday afternoon we rode out to Rutenburg, about a mile and a half from this city, near Olneyville, to witness the operation of the silk machinery, recently invented by Messrs. Gay and Mosely, of Connecticut, where we found a small silk manufactory, just going into operation. Repeated attempts have been made from time to time to manufacture this material in this country, but they have all hitherto failed, owing to the imperfection of machinery. The great difficulty has been in the outset in reeling the silk from the cocoons. The material in its raw state contains a glutinous substance of a very adhesive character, and in the ordinary mode of reeling the threads would adhere so that the skeins could not be wound off from the reel without great care, and, at best, very essential injury to the thread. Another impediment has been, that in spinning, the fibers of the thread were liable to be broken and fretted up by the friction of the machinery through which it passes. These imperfections have been entirely remedied in Gay & Mosely's machinery, and the silk passes through all the processes of manufacture from the cocoon to the loom, with all the rapidity and security from injury with which cotton is manufactured. The machinery is very simple, but very ingeniously contrived, and is worthy the observation of every friend of domestic industry. The improvement in this machinery, by which the adhesion of the thread on the reels and spools is prevented, consists in a transverse motion, by which the thread is carried rapidly from one side of the skein or end of the spool to the other, so that instead of lying parallel, the threads lie at angles across each other.

On our return we called to see the Donnelson farm, which has recently been purchased by an association of gentlemen for the purpose of growing silk. They are now in the process of transplanting 15,000 mulberry trees, already four years old, on one of the most beautiful spots of earth in this vicinity. These trees were originally planted for ornamental trees, at the garden of the Messrs. Dyers, which has lately been known by the name of "Mulberry Grove," and although the country did not seem to demand quite so large a supply of ornamental trees of that kind, the inventions of Gay & Mosely have rendered them exceedingly valuable, and probably one of the most lucrative sources of income that New-England now affords. All who have tried the experiment agree that the growing of silk yields an enormous profit on the capital employed, and as it may be grown without difficulty in every family in the country, we cannot doubt that it will soon become the great staple of the New-England states.

Transplanting.

I have often smiled with incredulity, at Cobbet's suggestion, that plants of cabbages, strawberries, &c., may as well be put out at meridian of a hot sunny day, as during a rain; but I begin to concur with him in opinion; provided the plants are first grouted, and well watered at evening following. Yesterday and the day before, (Aug. 6 and 7) the thermometer ranging at 85 to 92 degrees, the sun constantly shining, and during an extremely severe drouth, my gardener was employed in planting out strawberries and cellery, the plants being first divested of their larger leaves, grouted and afterwards watered. They have received no covering, and yet they have hardly wilted, and now appear nearly as fresh as those which have been left in the nursery beds. I do not think I shall lose a plant in two thousand.* My reasoning is this, that the plants, when taken up, being almost wholly devoid of moisture, and the ground extremely warm, the water with which they were supplied, imparted a remarkable vigor to them, and induced them to throw out new fibrous roots in a few hours after they were put into the ground. *To grout plants*, take any small vessel, or dig a hole eight or ten inches in diameter in the ground, put into it water and stir in earth till the mixture is of the consistence of porridge; into this dip and fully saturate and coat the roots of the plants. Plant with a *dibble*, a piece of a hoe or spade handle, 15 inches long, sharpened at one end; make a hole with this of sufficient depth for the plant, insert the roots, then enter the dibble a second time, an inch or two from the first hole, directing its point to the bottom of that hole, and when low enough, press the top of the dibble briskly up to the plant, thus bringing the earth in contact with all the roots, and afterwards closing the first hole. I have seen 500 plants put out in 30 minutes, in this way, by an expert man, the plants being dropped for him.—*Cultivator.*

Farming Implements.

Mr. Wm. Craig, of West Galway, exhibited at the Albany Cattle Fair several implements of his manufacture, substantially and well made, and after approved models, viz: a plough, after Scotch model, a pair of harrows, a hand drill barrow, a like one to be propelled by horse power, and a corn cultivator. As these implements are not common, and as we have had several inquiries made of us where they can be procured, we are happy to state, that they may be had by applying to C. N. Bement, of Albany, who will act as Mr. Craig's agent. The prices of these implements are as follows:—Ploughs $16, Harrows per pair $15, Cultivators $6, Drill Barrows $8, do. for horse power $10. We have used all these implements but the last named, and can safely recommend them as valuable and economical upon a farm.

Mr. B. F. Boyden, of Schenectady, exhibited malleable cast iron potatoe hooks, of an improv-

* Sep. 12. On carefully looking over the plants, I find that nine have died.

ed model, tinned to prevent their becoming corroded. We have used two or three kinds of hooks, as well as hoes, spades and forks, in harvesting potatoes, and have no hesitation in saying that this is superior to any implement we have ever tried, not only for expedition, but because, with due care, the crop may be gathered with them without being cut or bruised. Mr. Bement also sells these hooks.—*Cultivator.*

Treatise on the Culture of Yellow Tobacco.

(Concluded from page 375.)

HOUSING.

I now suppose you ready to commence housing your tobacco. If so, and you calculate to fire on Tuesday, it will be good policy to begin splitting on Monday; and split half an acre, which will fill your house aforesaid, of twenty feet square. Take great care in splitting, that your tobacco does not fall, as the sun will be very injurious or perhaps fatal. Split within five inches of the ground. Then commence on Tuesday evening and cut down something like three or four sled loads, taking good care to put your tobacco thereon as carefully as possible; and have it in your house before the departure of the sun. As your hands take the tobacco into the house, be particular to have it laid on smooth planks upon each side of the building. By taking the above course, you can, on the next morning, keep your hands employed until the dew gets off. When sticking, you should have as much stuck as will employ your hands sometime to hang it in the house.

The best and most expeditious mode in filling your house is, when you put the hanger and conveyors up, you should have enough of them to carry to the man who is engaged in hanging; and he should be a careful person, taking care to have the stick on which you have put from seven to ten plants, according to their size, equally regulated, and hang it from eight to ten inches asunder on the joists. A house should always be filled in one day, and this may be done by five good hands.

Be careful not to put your tobacco in the house wet, either by dew or rain, if you can possibly avoid it. So sure as it goes in wet, it will take a scald and houseburn.

After you have succeeded in filling your house, then make your hands clear out the house completely. But you may in a great measure avoid trash by leaving the old dead leaves in the field when you are engaged in hauling your tobacco to the house.

Housing, directly after a rain, is very bad policy; as the tobacco is then destitute of gum, which causes it to be very light, and it will not cure well. It is the better plan to wait two or four days after the rain, until the plant shall be again replenished with gum, unless it be late in the season, and an appearance of frost.

Firing.—I have already given you the theory necessary to be used in housing. It is now requisite to say something about firing the house above filled.

You should on the following morning, make six or eight very small fires under your tobacco, just warm enough without blaze to make your house milk warm. Keep the fire in that state until you discover the tobacco to turn a light goslin green, or green yellow, and well wilted; that is, when the majority of the plant shall be of that color. Then have your larger wood taken into the house, and this dry elm or hickory and old rails, with some green wood. When your fires shall commence to burn clear, and without a smother of smoke, then will be the time to put on some green wood. But be very particular not to have much blaze. A mediocrity should be observed until the house of tobacco shall be completed; which may be done in from two and a half to four days from the time the fire is first put under.

Whilst firing tobacco, you must *sleep* but little; otherwise your fires will either be too large or too small, and thereby spoil the house. Recollect this maxim, that a good soldier will not sleep when on guard, neither will a good firer of tobacco.

It will be well when you have completed firing your house of tobacco, if the weather may be very dry; for you to sprinkle over water, and thereby bring the tobacco in order to remove out of your firing house to your re-hanging house; which will contain four times as much tobacco as the house in which you fire, admitting it to be of the same size.

The re-hanging or *Stowing* houses should be made pretty close, as much atmosphere is injurious to fine yellow tobacco, both in weight and color, and will change a deep yellow to a dingy red, by being much exposed.

In regard to firing in your *Flue houses*, you should pursue the same course as in open fires; but be very careful to have your degrees of heat or temperature well ordered.

And you may have your tobacco much earlier in the season, if you cure in the leaf. I would recommend you to commence housing as soon as the bottom or ground leaves begin to ripen. You must have a very careful hand to *snap* the leaves from the stalk; and he must also have pretty good judgment to know what to take off when snapping leaves. You can string on twine or on very smooth, shaved sticks, but I would prefer the sticks with sockets, as aforesaid.

When you finish firing a house with flues and in the leaf, I would recommend you to have a very dry place to remove your tobacco into, and you will find that if your tobacco has been well killed in firing, that it will be good policy to take the same off of the sticks, place it in a very neat *bulk*, and let it remain so until you wish to *house* it. I prefer tobacco cured in the leaf, and with flues to any other mode yet known. It is evident that you will find it more tedious and expensive; but the additional weight and superior color of your tobacco, will well recompence you for the extra expense or tediousness of the process. Be very particular when firing your crop always to have each and every house well *killed* and the stems perfectly dried out, thereby avoiding all loss by mould, rot, or mildew; either of which would lesson the value of your crop much.

Assorting or Handing.—I now suppose your crops thus far secured. The next question is how are we to *assort* and *hand* the same?

If you should make a good and proportionable crop, I would advise you to make *four* sorts, namely, a *good yellow* or *fine*, a *handsome spangle*, the third a *fair* or *clear red* and *red spangle*, and lastly, a *green*. In all cases have your *hands* uniform in color and length, and put from twenty-five to thirty leaves in a *hand*, and wrap with a good leaf, nearly or quite covering the *heads* of the hand, always commencing with the wrapping leaf, turned inside out, and with the but end, and finishing with the tail, making all uniform. Let me assure you of one certain fact, and that is, there is more depending on the manner in which you assort and manage your tobacco than in the quality; and a good or bad sale greatly depends on proper management through all the different processes.

That which you *strip* through the day I would advise to have placed on neat shaved sticks, say with the heads two inches apart, and not too nearly filled to the ends of the sticks; and if this tobacco should not be too very soft, I would recommend you to have the same put in *bulk*, say not too large, the tails inward and heads outward, thereby giving the heads and shoulders of the tobacco an opportunity to dry. But should the tobacco you strip through the day be so soft that it will *clam* in handing, in that case you had better hang the tobacco up for a few days, so as to prevent injury when in bulk. The above mode of bulking is what I call the *stripping* or *first bulk*, and only calculated to remain in that situation for a short time, or until you get done stripping. If you find it is not likely to injure, which you can easily discover by once a week examining, by raising the bulk and inserting your hand, and if you find the tobacco sweet and cool, it is in good order, and if you discover your tobacco to be getting in a sweat, it will be best to hang it up forthwith, and by that means save your crop from rotting.

Conditioning or Qualifying Tobacco.—I would advise all planters when it is their intention to qualify by *air*, to let their tobacco remain in first bulk until the last of February, or the first of March; then if the weather has an appearance of being settled, hang up your whole crop, if you have it stripped, or have room; placing your yellow in the roof, your green next, spangle following, and the red below. Let your tobacco remain hanging until you can take a hand of tobacco in your hand and with ease break it short off, at the head, shoulder, or any other part. Now I would just observe that if the weather should be quite favorable for drying tobacco, that your tobacco will get in the above state in from ten days to three weeks, at farthest.

The next thing for you to know, is how and when to *take down* your tobacco? Have your bulking places raised off the ground from two to four feet, owing to the situation of your house, and eight feet wide, or according to the size of your crop; and put your tobacco down in double bunches, that is, twice the length of the sticks. And just as the leaf begins to toughen, so as to admit of bending, and the head and stems break freely, is the order in which to put your tobacco in bulk; what I term as it comes in *case*. And when put down in the above order, the tobacco, if packed in a suitable time, will be in *shipping order*.

A second mode of qualifying is by your flues, which may be done in two or three days quite effectually; and your tobacco when well dried, will admit of being taken down sowewhat *softer* than if qualified by air; and will also stand the test if packed at any season of the year. Just proceed as though you were firing a house of tobacco, only not quite as strong fires as your large fires, when firing green tobacco. The proper order to pack your tobacco in, is when the tobacco can be handled without breaking or crumbling too much; in short, when it is in a *spongy* state in respect to the leaf, and the stems, and heads break pretty freely. Or if in August, you can venture to pack when your tobacco is pretty soft.

Hogsheads.—You should have your hogsheads made of the following dimensions: say four feet two inches in height, and three feet three inches in diameter, with as little bulge as possible. The *heading should be about three-fourths of an inch* thick, and the staves scant half an inch, and from four to five inches broad. The preferable timber for staves is poplar, gum or sycamore, three-eighth of an inch when completely kiln-dried; and indeed all the stuff should be well seasoned before the hogsheads are put up.

Fellow Planters, permit me to assure you that I conceive the above treatise on tobacco as full an illustration of the growth and management of that article as is necessary to enable any man of moderate capacity to go through with the whole process with success; and I have been actuated by the purest motives for the promotion and welfare of that part of the community who may particularly wish to turn their attention to the tobacco business either as growers or purchasers. This article has unquestionably become one of the first in importance in Ohio; and will, this present year, circulate near *three hundred thousand dollars*, in our western country.

Another good effect tobacco has produced, has been the bringing into market a large portion of our south-eastern section of Congress lands, thereby affording a revenue to government, and homes to hundreds of poor individuals who have for many years until the introduction of tobacco in Ohio, been living in a state of almost abject poverty and want.

In truth, I have for a number of years been engaged in the tobacco trade pretty extensively as a grower, firer stripper, qualifier, seller and buyer, and can assure you that I am fully aware of all the difficulties in the different processes of the tobacco business and trade. And I think that should any person or persons wish to engage in the culture of fine tobacco, that in all probability he or they will be benefitted by having one of these treatises on the subject before him or them.

For the Genesee Farmer.

Associations for Improvements

IN AGRICULTURE AND ITS KINDRED ARTS, RECOMMENDED.

Not long since, expectations were entertained, that agricultural societies, under the patronage of government, would be instituted, in the several counties of this state. Many of our best informed citizens did believe, (and we are not informed that they have changed their opinions) that such institutions might be rendered eminently useful. Be this as it may, there is now little prospect, that the Legislature of this state will patronize any institutions, for the improvement of agriculture. Prejudices against such institutions which, several years since, had their origin in this state, (from what cause, I need not say) still exist. That such is the fact, will, I think, conclusively appear from a late official report, on the subject of agricultural societies, &c. presented to the Senate, by its committee on agriculture, of which Mr. Halsey was chairman. If the sentiments of that report still prevail, and are likely to prevail in the Legislature, it will be in vain to carry up to that body, petitions in behalf of agriculture. Farmers then should resolve to make what they can, of their own resources.

Associations for improvement in the rural arts, independent of public funds for their support, may be formed, and, if I mistake not, formed to very great advantage, in all the towns, villages, and hamlets of this state. If desired, they may be termed, Lyceums for the improvement of agriculture and its kindred arts. Small initiation fees should be required of members, and the funds thus obtained, be expended in the purchase of libraries. To every such institution, a library, consisting of books adapted to its use, should be considered as an indispensable appendage. The proprietors of this library should meditate its *gradual and perpetual* increase. Thus, in time, the library room will become a rich depository of useful knowledge.

The members of such institutions must hold meetings, at stated times. Their meetings, should be held frequently, monthly at least, perhaps, in the winter season, more frequently. In the orderly discussion of subjects previously selected, and bearing on the interests, intended to be promoted by the institution, it is believed, these meetings may be rendered eminently useful. The advantages that may result to farmers, and especially to young men, engaged in agricultural pursuits, from being present at such meetings, and taking in them active parts, are beyond calculation. Think, too, of the immense advantages that might accrue to any town, village or hamlet, from the possession of such a library as has been suggested. To an institution affording privileges so great, I would, advanced as I am in life, gladly attach myself, and cheerfully contribute to its funds. DAN BRADLEY.

Marcellus, Nov., 1834.

For the Genesee Farmer.

Is Poultry Profitable?

In the Genesee Farmer of the 25th Oct., is an article highly in favor of raising poultry, and it expresses "surprise that more attention is not paid to this branch of farm stock."

Probably in the neighborhood of large towns where alone "a turkey will command as much money as a bushel of wheat, and a chicken is equal in value to a bushel of corn"—it may be an object to bestow particular attention to them.

In other parts of the country turkies are not worth more than from 37½ to 50 cts. and chickens from 12½ to 18¾ each.

In my opinion, and I believe it is the opinion of a large number of farmers, a large quantity of poultry is very unprofitable on a farm,—at least while we permit them to run at large, which is nearly always the case.

They are particularly so when we sow grain in the neighborhood of the house or barn. This has been the case with one of my fields this fall. I found it impossible to keep the poultry out unless I went to the trouble of preparing an enclosure for them.

I noticed this past summer a field of wheat of my neighbor's which was awfully thinned by his turkies. I should suppose he may have lost enough wheat to have bought 100 turkies.

Last spring I received an assortment of choice seed—English peas, four or five sorts, and various kinds of melons and squashes—which I was obliged to plant near the barn—my garden being filled.

To my disappointment, I have lost them all by my poultry. What few plants they permitted to come up were destroyed in the fruit by them. Perhaps this was my fault more than the chickens.

I am therefore obliged to confess, whether through my negligence or what, that my poultry has been a sacrifice rather than a profit to me the past season. And I am not alone.

Milo, Yates co., Nov., 1834. POOR RICHARD.

For the Genesee Farmer.

Practical Hints.

"An ounce of prevention is better than a pound of cure."

Like a multitude of the other sayings of Poor Richard the Scribe, or in other words, of Franklin the Philosopher, the simple maxim we have quoted, contains an important truth, capable of an almost every day application. One half of the evils of life, its misfortunes and its vexations, spring from causes trifling in themselves, and which a moment's attention at the first might have prevented. Suppose some of the ways in which we farmers manage, are tested by this rule, and see what is the result.

My neighbor complains to me that one quarter of his wheat crop is chess, and he excuses himself for this result by believing in the absurdity that wheat turns to chess. Ask him whether his seed was clean, and he will admit there might have been a little chess, and perhaps some cockle in it; but then "chess never grows," and on the whole, it was good seed. To show what many people call good clean seed, let me state a fact. I sent this year twenty miles after my seed wheat, experience having proved that a great profit is derived from such a change of seed. The wheat purchased was pronounced the clean stuff, genuine wheat, the real "Simon Pure." From twenty bushels of this clean wheat, I separated with my hand screen, nearly half a bushel of worm-eaten defective seed, and chess, cockle, and stein krout enough to stock the whole farm. Let the farmer who wishes clean wheat, remember that in preparing seed wheat "an ounce of prevention is worth a pound of cure," and half a day spent in cleaning seed is better than a month of weeding, pulling and digging in your fields before harvest.

Another farmer says, I dont know what I shall do with my wheat; it is so smutty that it is not fit to use or sell without washing; and to wash three hundred bushels of wheat is no trifling job. Was there any smut in your seed? Yes, a little, but not enough, I imagine, to injure it. Did you roll it in lime before sowing? No; I afterwards remembered that I had heard that rolling in lime would prevent smut; but I was careless, and the fact had slipped from my memory. You should never trust such things entirely to your memory. Place on your shelves some good agricultural journal, and you would not be so apt to forget; farmers as well as others require to have their minds occasionally "stirred up by way of remembrance." Never sow wheat until the downy ends of the kernel have been carefully examined. If they are dark and discolored, although no smut kernels may be present, roll it in lime; and if you do not get your pay in the prevention of smut, you will most assuredly in the increase of your crop of wheat. It may be set down as a maxim in the culture of this grain, "no lime, no wheat." W. G.

For the Genesee Farmer.

On the Absorbent Powers of the EARTH.

It is doubtless a part of the Divine economy, that man should beautify and improve the face of nature, and thus add to the comfort and happiness of his species. But few there are who do this upon the principles of philosophy, or even know that scientific principles are applicable to the most ordinary avocations of the husbandman. We plough the earth and scatter the seed because our fathers did so, and because the results of experience convince us that we shall meet the reward of plenty in house and barn. But the circumstance that by doing so, we add to the fertilizing properties of the soil, is to many a *discovery*. I have read in English newspapers the advertisements of the owners of extensive domains, who enumerate among the advantages belonging to the lands they wish to demise, that they have not been ploughed for upwards of two hundred years. We could scarcely give credence to the slow progress of agricultural science, in a country where the theory of Davy, and the experience of Young and Sinclair, have been so long promulgated, were it not within the reach of memory that uplands without watered meadows in many parts of our own country were considered valueless, and that the introduction of clover alone, has, within half a century, changed the whole system of American husbandry.

The theory of absorption furnishes the chief reason for ploughing, and besides furnishing an almost infallible test of the quality of the soil, is the foundation of practical agriculture. To detail its peculiar and necessary consequences would require a tedious if not volumnious tract; happily however, for that large portion of mankind who are incapacitated by habit and education from pursuing these inquiries, they have the results of experience for their guide. This faithful parent of correct conclusions, teaches them that ploughing their land in the fall, fits it for busi-

ness a week or ten days earlier in the spring. But it does not explain to them the seeming paradox, that although land contains more moisture than when left in grass or stubble, it is dry enough to plough when stubble land is unfit; and there are many men of practical good sense, who would smile if they were told there was more moisture in the ploughed land, but who if they were asked what advantages besides extirpating weeds and grass are derived from ploughing corn during a drouth, will tell you without hesitation, that it keeps the plant moist and healthy. A very slight acquaintance with the absorbent powers of the earth would not only make both copclusions appear rational, but would lead to many other practical results.

The absorbent powers of the earth are increased by heat, because of its expansive qualities, and because capillary attraction is in proportion to the reduction of the attraction of cohesion. Hence what in ordinary language is called a warm soil, is nothing more than a capacity to imbibe caloric, and hence, lands within the temperate zone, are often more fertile than those within the tropics. This capacity is wonderfully increased by ploughing, and it is nothing more than a just tribute to his memory, to say, that the Inventor has been a benefactor to his race. But there are many other means by which the capacity of lands to receive caloric are increased, and until we can open the arcana and exhibit all the operations of nature, it is in vain to set limits to human discovery. Our improvement of soils must in a great degree be dependant, not upon ploughing alone, but, upon the application of such manures, as will separate them into the minutest particles, and a test may thus be furnished of the comparative value of rotten or unfermented barnyard manures, and of the mode in which it can be most economically applied.

But whilst it is a well founded opinion that the absorbing power is increased *in proportion* as the cohesive attraction is diminished, there is an exception to this rule. Alumina will have its tenacity reduced by a mixture of silica. But the absorbent power of the mass will not be proportionally increased, because sand is not an absorbent. And although the mixture will absorb more than either of the parts, it will not absorb as much as the same bulk of alumine when its particles are opened by a mixture of quicklime and stable manure. Silex is probably the best mixture that can be applied on a farm, consisting chiefly of alumine, because it is by far the cheapest, and few farmers can afford to apply other manures in sufficient quantities to diminish the cohesive and increase the capillary attraction to a proper extent, but when the sand is well mixed with the clay, the soil is prepared for retaining what further manures may be applied.

It seems to be a clear deduction from these premises, that the power of absorbing moisture, is in proportion to the fertilizing powers of the soil, but it must not be inferred that the soil which is most saturated with water would therefore be the most fertile. There is no process by which soils can be improved better than by the simple one of watering, but if it has more water than it can absorb, the application becomes immediately injurious. Besides upon the largest proportion of our uplands it is impossible to be done, and therefore, we have recourse to practical expedients. Gypsum adds to the cohesive attraction, and if it had no other properties of a fertilizing character would be injurious; but we learn from Davy's Elements, that it is not only food for plants; but possesses the power of holding the soil in a state of solution, and thus adds, in a most surprising degree to its fertility, hence its extraordinary power in dry seasons is accounted for. And hence its energies are neutralized in a wet one. We may safely draw similar inferences from its application upon dry and wet land. Upon the former it is useful, upon the latter its power of holding the land in solution, is not only anticipated, but overreached by the operation of nature. Lime has an opposite tendency, it diminishes the cohesive and increases the capillary attraction. But it has many other properties besides increasing the power of absorption. It is an anti-septic* and is an active agent in the preservation of vegetable manures, and its diffusive properties whereby acids are expelled, and the richness of the soil spread over a great extent of surface, renders it perhaps one of the most valuable productions with which agricultural science has enriched her votaries.

Facts like these, serve to guide us in the most ordinary acts of our lives. When land is supplied with gypsum, alternate ploughing and cropping is absolutely essential to keep it in a productive state. When abundantly limed and manured, frequent ploughing is not so absolutely requisite to its fertility. But there can be no question that ploughing is an operation by which the attraction of cohesion is diminished, and the capillary attraction is increased. Hence, it is not only profitable in itself, but enables the land to absorb manure to more advantage, and must greatly add to its fertility when the manure is applied. Simple, however, as the process of ploughing may appear, if it is done upon land containing large proportions of alumina when it is saturated with moisture, instead of diminishing the cohesion and increasing the capillary attraction, it has a contrary tendency. It adds so much to its cohesive properties, that in some instances it destroys vegetation altogether until the operation of the sun and frost again assist the moisture in reviving its vegetative powers, and thus prevents the ignorant and misguided from depopulating some of the fairest portions of the earth. The most simple observer will be forced into the necessity of care upon the mere process of ploughing. If the land will not crumble into particles as it leaves the ploughshare, but falls in an unbroken cake from it, the unavoidable consequence will be that a hot sun will bake it as though the operator was making brick, and will entirely destroy all the benefits arising from his labor.

There are many other inducements for frequent ploughing, or as it is usually called alternate cropping; but the limits of an essay are too narrow for them all. HOLKHAM.

* Its septic properties when mixed with vegetable mould, and its active agency as a solvent whereby every particle of the vegetable and animal substances in the soil are held in solution, are not inconsistent with this conclusion as we shall endeavor at some future time to explain.

We see advertised for sale in a Manchester (Eng.) paper, a sow which had been the happy mother within *eighteen months, of sixty-one pigs.*

Clover may always be Sown upon small grains with profit.

We sowed clover upon four acres of rye and two of barley last spring, and notwithstanding the dry weather, it took well. After pasturing the rye stubble some ten or fourteen days, the autumn feed was sold for $12,50. The barley ground has afforded an abundance of fine feed. Say the six acres required a bushel of seed, at $6, and that the fall feed was worth $18, there will be a profit of $12, or $2 per acre. But the clover lay will furnish at least 30 tons of vegetable food to the next season's crop, if turned under the first of May, which will be no inconsiderable increase to the profits. These littles will make up a handsome aggregate upon a farm in a few years; and there is no economy of this kind which *should be considered beneath a farmer's notice.* "A penny saved is as good as two pence earned," as Poor Richard says.—*Cultivator.*

Unfermented Manures.

There is one strong reason for using long or unfermented manure for hoed crops, which chemistry furnishes: When the manure begins to rot, it affords to plants moisture as well as food. Unfermented manure consists principally of carbon, oxygen and hydrogen, in a solid form; and these simple substances, too, are to become the constituents of the new plant. But ere they can be incorporated with the new plant, they must be separated from each other, and be reduced to a liquid or gaseous state. As soon as this decomposition begins, two new compounds are formed by chemical process: a part of the oxygen unites with the carbon, and this always in certain proportions, and forms carbonic acid, the principal food of plants. The remainder of the oxygen unites with the hydrogen, and forms water, which serves as a medium to convey this food to the mouths of plants. Thus the whole of the dead plant is transmuted into the living one. Hence soils, in which manures are undergoing decomposition, suffer least from drouth; hence moisture always abounds under a decomposing mass of straw; and hence I have raised, upon a dry sandy soil, and during the last very dry and hot summer, a fine crop of melons, on a layer of eighteen inches of straw, deposited dry in a trench, and covered with six inches of earth. The straw became completely decomposed. We would apply these remarks to hoed crops, because long manure is apt to be prejudicial to all the small grain crops, by causing too rank a growth of straw; but it is peculiarly adapted to Indian corn, potatoes, ruta baga, and all the crops raised for the stalk or root. We would also admonish against using long manure, especially in a dry state in hills or in drills, for if the season is dry, decomposition does not take place. But spread, and ploughed under, it will take place in due time on the sandy, gravelly and loamy soils adapted to corn, ruta baga, &c. —*Ib.*

To test the quality of Gypsum,

For there is a material difference in this mineral,—there are two modes recommended, both within the reach of the common farmer. One consists in putting a quantity of it pulverized into a kettle over the fire, and when heated it gives out a sulphurous smell. If the ebullition, or bubbling, which takes place, is considerable, the

plaster is good; but if not, it is considered indifferent: and if it remains motionless, like sand, it is thought to be hardly worth any thing.—(*Parkinson.*) The other test of its goodness is obtained by putting the powder alone into an iron pot over the fire, and when it bubbles, like boiling water, it will admit of a straw being thrust to the bottom without resistance.—*Ib.*

Means of Inducing Fertility.

APPLICATION OF LIME.

Those purposes appear to be—first, to render whatever substances may be lodged in the soil, or matter which forms part of it, and which may be injurious to vegetation, either harmless or useful; and thus to prepare the soil for the reception and nourishment of seeds and plants: and secondly, to facilitate the decomposition of putrescible matter, so as to furnish food to vegetables during their growth. It has been proved by careful experiment, that the application of lime is the only known alternative which, upon poor, weak, and weeping clays, has power to heal the soil. With the assistance of water, it suddenly decomposes all animal and vegetable bodies, and when thus spread upon neglected ground covered with heath and moss, the old turf is decomposed, and a saponaceous matter is formed which sinks into the soil and covers it with sweet herbage. We also know that it imparts a certain degree of vigor to some peculiar plants—as, for instance, sainfoin, the roots of which penetrate far into the interstices of chalk, and grow luxuriantly, though only covered by a slight coat of inferior soil.

It is however an error—though entertained by many farmers,—to suppose that lime in any state comprises fertilizing properties within itself; and that, without operating upon the soil, or upon the substances which it contains, it is an enriching manure. It does not possess any fertilizing principle in its own composition: it is merely a calcareous earth combined with fixed air, and holding a medium between sand and clay, which, in some measure, remedies the deficiencies of both. But though, when alone, unfavorable to the growth of plants, yet experience shows that it is an ingredient in soils which, whether naturally forming a component part of their substance, or judiciously mixed with them by the husbandman, adds greatly to their fertility, for it has the power of attracting much both from the earth and from the air, which occasions the decomposition of plants, and thus converting them into nutriment, it gives power as to vegetation which, without its operation, would otherwise lie dormant. It also appears to act with great force upon that substance which, being already converted by the decomposition of plants into a species of earth, we call *mould.*

The other causes with which we are acquainted regarding the operation of lime as a manure would lead to a chemical discussion, which could only prove uninteresting to the generality of our readers; we shall therefore confine ourselves to the following observations:—There can be no doubt that it is a most powerful stimulant when applied to deep loams and heavy clays, which contain mould of a nature so sour as to appear to unfit them for the purposes of vegetation; or to land which has been previously either more or less manured with animal or vegetable substances, without any addition of lime or other calcareous matter, in which case it often produces effects far more fertilizing than the application of dung, for its active powers render every particle of the putrescent manure useful; but if the latter be not afterwards repeated at no great distance of time, the soil will, in the course of a few years, become considerably exhausted. In all arable land, however impoverished it may be, either by nature or bad management, there yet always exists some portion of mould, and, on this a first dressing of lime occasions a sensible improvement of the soil, which soon becomes apparent in the increased product of the crops. A second dressing will also be attended with some apparently good effect; but unless that, and every succeeding repetition, be accompanied with ample additions of farm yard manure, or other putrescent matter, to supply the loss thus occasioned by the exhaustion of the vegetative power, every future crop will be diminished. The land is then necessarily thrown out of cultivation, and left for a series of years to recover itself under pasture, which, in the course of time, may be effected according to its former condition; but in the interim it is rendered nearly fruitless. It is thus that many thousands of acres in every part of the kingdom have been run to a state of almost total infertility; and it is even said, that the too great use of lime, though apparently judiciously employed by some of the first farmers in the Lothians, has been lately found very detrimental of their crops.

Marsh lands, however, which have been drained, will generally support a repeated and abundant application of lime, because they usually contain a large proportion of matter upon which the stimulating powers of lime are peculiarly adapted to act; and it will be found much better suited to the purpose than dung. On all rich, deep, dry, and loamy soils it may also be applied with effect; for although they contain within themselves the component parts of the best soils yet they are frequently found to be sluggish and inert; and dung, whether through imperfect fermentation or owing to the want of calcareous matter, often remains dormant in the land until roused by moderate quantities of quick-lime, which, if applied at distant periods, will effectually operate to bring it into activity. It should however, be turned into the ground some weeks before the dung, in order that it may become thoroughly slaked by mixture with the soil, or otherwise it would have the effect of abstracting some of its nutriment. Such soils, after the application of lime, produce much heavier crops with a much smaller proportion of dung than if no lime had been used, because the operation of the latter acting upon the dung renders every portion of it useful.

Clay land shows an evident disposition to combine with lime, and it bears the repetition of this species of amelioration better than lighter soils. When applied to heavy tillage land, either for the purpose of reducing its cohesive properties, or of supplying an additional quantity of calcareous matter, small dressings of lime will have but little effect, and if sand or calcareous earths are to be employed, it is recommended, by a practical farmer of known experience, as more economical to apply them separately than as a compost. It powerfully assists all adhesive soils; and when laid hot from the kiln upon deep clay, it has been known to occasion a very large increase in the former crops. It has also been often observed, in fallowing clayey soils, "that, in wet weather, when a dose of lime has been just given, the land continues more friable, and is less apt to bind up on the recurrence of drouth, than where it has been neglected. The grain growing on the well-limed ground preserves its healthy appearace in wet seasons, while that growing on land that has not been limed is yellow and sickly.

Upon *sandy soils,* which seldom abound much in vegetable matter, lime has a mechanical operation, which, by combining with the finer particles of the soil, gives consistence to the staple of the land, and attracting the moisture from the atmosphere, it imparts it so gradually as to be less liable to be hurt by drouth in those parching seasons by which crops are injured. It is therefore said to be cooling to hot land; but if it be not also mixed with some portion of clay, with which it may combine, it then is apt to unite itself with the sand, with which it composes a kind of mortar, the effect of which has been already described, and which cannot be dissolved without much difficulty, and the plough often brings hard lumps to the surface of the soil which cannot be easily broken. Thus when such land has been frequently limed, nothing can restore it but the abundant and reiterated application of putrescent manure; the demonstration of which is perceptible throughout many parts of England, where, from possessing a chalky soil without strength to maintain a sufficiency of live stock to furnish dung, the land has in many places been worn out through the inconsiderate use of lime.

On the *exhaustion of land by the application of lime* there is, however, much difference of opinion. It is indeed evident that the continuation of cropping, without an addition of nutritive manure, will ultimately exhaust the best soils; but though their natural fertility be thus aided, it yet cannot depend entirely on that support. This must be apparent if we reflect that land, without any addition of animal or vegetable substance, will still produce crops: for pure sand, clay, and chalk, though each in themselves separately barren, yet, when mixed together, exert chemical influences upon each other, which, by the attraction of the air, the dews, and the rain, the force of the sun, and the generative powers of growing vegetables, effect the production of corn and fruit. It is therefore clear that the land alone is capable of vegetation; but every day's experience proves, that the amount of its products, its fertility, in short, depends in a great degree upon the decomposition of the substances which have been previously converted into vegetable mould, or which are added to it by manure. Any thing whatever may be called manure which, when applied to the soil, either rectifies its mechanical defects, corrects any bad quality, and either stimulates it to yield, or stores it with nutriment. Thus, if lime be laid upon pure sand, although the latter would be rendered more tenacious, and would thereby become more favorable to the germination of vegetables, yet seeds could find no nourishment from either the lime or the sand, and putrescent manure would still be necessary to produce a crop. But if the soil consists of clay and sand, containing animal or vegetable matter in a torpid state of decay, then lime would be

preferable to dung. The state of the soil should therefore be minutely inquired into before lime is employed, and it should be only used to give effect to the inert substances with which it may be combined.

By the analysis of soils, we find that all productive earth contains a certain portion of lime: and although we learn from experience that its stimulative powers upon the roots of plants are very great, yet we are but imperfectly acquainted with the extent or the exact manner in which its influence is brought into action, and "we are in a great measure ignorant of the actual changes that are produced upon the earth after this manure has been applied." It would, however, seem, that, where it exhausts, it is only by hastening the putrefaction of the animal and vegetable matter in the soil, and by that means applying a larger portion of those substances in a given time than could be otherwise afforded to the growth of plants. It is thus known to produce more luxuriant crops, and it will also consequently enable the farmer to continue his land in tillage, during a certain time, with more effect than if no calcareous manure had been laid on; but, although it may not tend to the deterioration of the original staple of the soil, it can hardly be doubted that it must be thus more promptly deprived of its fertility than if the exhaustion of that vegetable mould with which it had been supplied by nutritive manure were occasioned by a more gradual process of decomposition.

That this is the only way in which effete lime can exhaust land, seems probable from the large quantities of neutralized calcareous earth which are often applied without any bad effects in the form of chalk, shells, limestone-gravel, and the whole tribe of marls. A larger quantity of these is oftener laid on in one year than would be used of lime in half a century, were the land in tillage to be managed according to the custom of some countries; yet it is not generally improverished, and, in many cases, it is permanently improved. This, however, is probably occasioned by its combination with other substances, which either counteract its exhausting powers or supply the waste of nutritive matter.

The employment of lime seems to be of the greatest service in the *breaking up of fresh and coarse land*, on which it acts more powerfully than on soil which has been long in cultivation, and indeed the most striking improvements have been effected by its means on moorlands and mountain; but it should be given for the first time abundantly. Such is the usual effect of lime upon arable: upon *grass-land* it is laid in smaller quantities; and in this top-dressing, perhaps the preferable mode is to apply it in a compost with earth; except when the soil consists of clay. When thus spread upon the surface, its action upon the sward is productive of the most palpable improvement, and continues perceptible during a long period. No other manure will create so rapid a change; for it is such an excellent corrector of acidity, that it tends to produce the sweetest herbage where only the most unpalatable pasture was formerly to be found. This, indeed, is so apparent, that if a handful of lime be thrown upon a turf of rank, sour grass, which has in former years been invariably refused by cattle, they will afterwards eat it close down. Now, animal dung, when dropped upon coarse benty sward, produces little or no improvement until limed; it then, however, not only augments the crops, but the finer grasses continue in possession of the soil, and the land is thus doubly benefited; for the dung dropped by the stock on which it is pastured, is both increased in quantity, and improved in quality.* Farmers should never consider lime as the food or nourishment of plants, but as an alterative of the soil; never to be used but when nature requires it, either to dissolve noxious combinations, and to form new ones; to bind loose soils, or to diminish excessive cohesion; and to reduce the inactive vegetable fibre into a fertile mould. For such purposes there is not, perhaps, a more valuable article in the whole catalogue of agricultural remedies; but some farmers, who do not reflect upon the subject, when they perceive that lime has once excited the dormant powers of the soil into action, and that good crops succeed for a few years, are apt to draw from thence very false conclusions, and continue liming and tilling without the assistance of putrescent manure, until their land at length is rendered incapable of the production of corn. It has indeed been pertinently observed by a good judge of such matters, "that there is an analogy between the treatment suitable to the animal and vegetable creation. When medicines have removed the cause of their application, they are discontinued, and the patient, rendered weaker by the application, requires some invigorating aliment: in like manner, some time after an effectual liming, the soluble carbon of the rotten dung, or some such restorative, should be applied to the soil to replenish it with what it may have been robbed of by the action of the lime."

If fine, lime should always precede putrescent manures when breaking up old leys for cultivation, for, if the land contains acids, or noxious matter that is poisonous to plants, they will be decomposed and rendered fit for vegetation; and hence the superiority of lime to dung on new lands. But calcareous and putrescent manures operate very differently: "the former, being more stimulant and corrective, help the farmer to an abundant crop at the expense of the soil alone; while the latter furnish the land at once with fertilizing fluids, and will insure a good crop on a place perfectly barren before, and after the application of lime."

Much uncertainty prevails among farmers *regarding the state of lime*: some contending that it should only be applied when hot and powdered, and that when it has been slaked, its effect is comparatively trifling: others maintain the contrary. But these disputants consist chiefly of men whose experience has either been confined to one kind of soil, or who have only used it under particular circumstances, and as they only condemn the system of others because their own has turned out successful, or the reverse, it is not improbable that, in the view they take of the subject, each may be in the right. It will therefore probably be found, that in all cases where the land is constitutionally disposed to receive benefit from a calcareous dressing, that is to say, when it has not been previously limed, or when it has been long laid down and refreshed by grass, or enriched by the application of dung, it is of little importance whether the operation take place when the lime is quick or effete. Upon waste lands, however, its causticity has an evident and necessary effect; for the undecayed vegetables, which abound in all soils in a state of nature, should be speedily decomposed, and it should therefore be spread hot from the kiln. In point of economy, too, there can be no doubt but that it is most thriftily used when laid upon the land in the latter state: for the labor is less; and a smaller quantity will serve the immediate purpose. It is, however, obvious that the choice of circumstances and season is not always in the farmer's power; and that necessity often obliges him to lay it on when completely effete. It has been said, indeed, upon high authority, that caustic lime exhausts the land; but repeated trials have shown that its ultimate effects are equally beneficial in the one state or the other, though there is a more immediate advantage in the employment of quick-lime by the destruction of weeds. A common method is to leave it spread during some months upon clover or sainfoin, not intended to be broken up until the following year, a plan which is advisable with regard to marl, which partakes of some of the qualities of lime, and is the better if allowed to remain during a season exposed to the atmosphere; but the stimulating properties of quick-lime will be thereby lost, as it will be converted into mere chalk. Opinions are also much divided respecting its effects when laid upon the pasture land which is intended to be kept in grass. There is indeed no question that, in either state, if applied in moderate quantities to a dry soil, or to land that has been completely drained, such a top-dressing will have the most beneficial effect upon the herbage; but it must be admitted, that when laid on quick, it requires more circumspection in its application, and should not be employed in the same quantity as when effete.—*British Husbandry.*

* In Derbyshire the farmers have found that, by spreading lime in considerable quantities upon the surface of their heathy moors, after a few times the heath disappears, and the whole surface becomes covered with a fine pile of grass, consisting of white clover and the other valuable sorts of pasture-grasses.—Anderson's Essays, 4th edit. vol. i. p. 527. Survey of Derby, vol. ii. p. 437; and of Westmorland, p. 235.

List of Payments

For the Farmer from Nov. 13, to Nov. 27, 1834.
For vol. 4.

Samuel Griggs.
Joseph Blodget.
H. P. Sartwell.
Frederick S. Wicker.
Abelard Reynolds.
Alex. Duncan.
Mass. Hort. Society, to July, 1837.
Wm. C. Dwight, vols. 4 and 5.
A. A. Ellicott, for vol. 5.
Joseph Ridgeway, to July, 1835.
Ansel M'Kinstry, last half vol. 4.
George Hosmer, first half vol. 4.

Monroe Horticultural Garden & NURSERY.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or *Chinese Mulberry*, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

Orders by mail or otherwise will be promptly attended to, and packages delivered in Rochester, or at the Canal one mile from the Nursery.

☞ Orders for *Mr.* Rowe's Nursery received by the Publisher of this paper.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

Greece, *Monroe* co. N. Y. Sept. 13, 1834.

Rochester Seed Store and Horti-CULTURAL REPOSITORY.

REYNOLDS & BATEHAM, are just opening at their store, No. 60, Buffalo-st. (Eagle Block) a large assortment of seeds of English, French, German and American growth. Their assortment is nearly complete, and additions will constantly be made as fast as importations of the new crop arrive. Their collection embraces a variety of new and valuable kinds, well worthy the attention of farmers, suchas Hopeton and Early Angus Oats, English Potatoe do., (weighing 44 lbs. to the bushel,) Winter Tares or Vetches, Spring do., Orchard Grass, Pacey's Perennial Rye Grass, Lucern, Trefoil or Yellow Clover, Trifolium incarnatum, or Flesh Colored Clover, Sainfoin, Millet, Mangold Wurtzel, &c. Also, Top or Tree Onion, and a few Potatoe do. A Green House and Horticultural Garden are in progress, and all orders for Seeds, Trees, Shrubs, Grape Vines, Green House Plants, &c. will be faithfully executed.

Rochester, Oct. 25, 1834. oct 25

Moubray's Treatise on Poultry, &c.,

WITH abridgements and additions by the Editor of the New England Farmer, price 50 cts. For sale by HOYT PORTER & Co.

An Autumn Thought.

We watch the summer leaves and flowers decay,
And feel a sadness o'er the spirit thrown,
As if the beauty fading fast away
From Nature's scenes would leave our hearts more lone,
More desolate, when sunny hours are gone—
And much of joy from outward things we find,
But more from treasures than our own
Through winter's storm; the higher hopes of mind
The trust which soars from earth—earth has no chains to bind.

Woman's Heart.

That hallowed sphere, a woman's heart, contains
Empires of feeling, and the rich domains
Where love, disporting, in his sunniest hours,
Breathes his sweet incense o'er ambrosial flowers;
A woman's heart!—that gem divinely set
In native gold—that precious amulet
Which firmly linked to love's electric chain,
Cements the worlds of transport and of pain.

Genius.

Yet what is wit, and what the poet's art—
Can genius shield the vulnerable heart?
Ah no! Where bright imagination reigns,
The fine wrought spirit feels acuter pains;
Where glow exalted sense and taste refin'd,
There, keener anguish rankles in the mind;
Thrills in each nerve, and lives in all the heart;
And those, whose gen'rous souls each tear would keep
From others' eyes, are born themselves to weep

Human Life,

OR THE FIRST AND LAST MINUTE.

Minutes pass.—The anxious husband paces slowly across his study. He is a father, a man child is born unto him.—*Minutes pass*—the child has been blessed by a parent, whom it cannot recognise, and pressed to that bosom, to which instinct alone guides for sustenance—the young wife too has faintly answered to a husband's questions, and felt his warm kiss on her forehead.

Hours pass.—The low moaning from the closely covered cradle, tell of the first wants of its infant occupant. The quiet tread of the nurse speaks of suffering around her; while her glad countenance says that the very suffering which she is trying to alleviate, is a source of joy, and the nameless articles, which from time to time she arranges on the hearth, tell of a new claimant for the courtesies and attentions of those who have progressed farther on the path-way of existence.

Days pass.—Visiters are thronging the chamber, and the mother, pale and interesting after her recent sickness, is receiving their congratulations, and listening proudly to their praises of the little treasure, which lies asleep in its rocking-bed at her feet. The scene shifts, and the father is there with her alone, as the twilight deepens about them, while they are planning the future destiny of their child.

Weeks pass.—The eyes of the young mother are sparkling with health, and the rose blooms again on her cheek, and the cares of pleasure and home engage her attention, and the father is once more mingling with the world; yet they find many opportunities each day to visit the young inheritor of life—to watch over his dreamless slumber—to trace each others looks in his countenance, and to ponder upon the felicity, of which he is the bearer to them.

Months pass.—The cradle is deserted. But the chamber floor is strewed with play things, and there is a little one loitering among them, whose half lisped words, and hearty laugh, and sunny countenance, shows that his entrance into life is over a pathway of flowers. The cradle is empty, but the last prayers of the parents are uttered over the small crib, which stands by, and their latest attention is given to the peaceful breathings of its occupant.

Years pass.—Childhood has strengthened into boyhood and gamboled along into manhood. Old connections are broken—parents are sleeping in their graves—new intimacies are formed—a new home is about him—new cares distract him.—He is abroad, struggling amid the business of life, or resting from it with those whom he has chosen from his own generation. Time is beginning to wrinkle his forehead, and though has robbed his looks of their gaiety, and study has dimed the luster of his eyes. Those who began life after he had grown up, are fast crowding him out of it, and there are many claimants upon his industry and love for protection and support.

Years pass.—His own children have become men, and are quitting him, as he also quitted the home of his fathers. His steps have lost their elasticity—his hand has become familiar with the cane, to which he is obliged to trust in his walks. He has left the bustle which fatigued him. He looks anxiously in each day's paper among the deaths—and then ponders over the name of an old friend, and tries to persuade himself that he is younger, and has a better hold upon life than any of his cotemporaries.

Months pass.—He gradually diminishes the circle of his activi y. He dislikes to go abroad where he finds so many new faces; and he grieves to meet his former companions, after a short absence, they seem to have grown so old and infirm.—Quiet enjoyments only are relished - a little conversation about old times a sober game at whist—a religious treatise—and his early bed, form for him the sum total of his pleasures.

Weeks pass.—Infirmity keeps him in his chamber. His walks are limited to the small space between his easy chair and his bed. His swollen limbs are wrapped in flannels. His sight is failing—his ears refuse their duty, and his cup is half filled, since otherwise, his shaking hand cannot carry it to his shrunk lips, without spilling its contents. His powers are weakened—his facilities are blunted—his strength is lost.

Days pass.—The old man does not leave his bed—his memory is failing—he talks but cannot be understood—he asks questions but they relate to transactions of a former generation—he speaks of occurrances, but the recollection of no one around him can go back to their scenes—he seems to commune with comrades, but when he names them, it is found that the waters of time and oblivion have long covered their tombs.

Hours pass.—The taper grows dimmer—the machinery moves yet more slowly—the sands are fewer as they measure the allotted span. The motion of those about him is unheeded, or becomes a vexation.—Each fresh inquiry after his health is a knell. The springs of life can no longer force on its wheels—the silver cord is fast untwisting—the pitcher is broken at the fountain—and time "is a burthen." His children are about him, but he heeds them not—his friends are near, but he does not recognise them. The circle is completed. The course is run—and utter weakness brings the damp which ushers in the night of death.

Minutes pass.—His breathing grows softer and lower—his pulse beats faster and feebler. Those around him are listening, but cannot tell when they cease. The embers are burnt out—and the blaze flashes not before it expires. His "three score years and ten" are numbered. Human life "is finished."—*N. E. Galaxy.*

KNOWLEDGE.

What is it that mainly distinguishes a man from a brute? Knowledge. What makes the vast difference there is between savage and civilized nations? Knowledge. What forms the principal difference between men as they appear in the same society? Knowledge. What raised Franklin from the humble station of a printer's boy to the first honors of his country? Knowledge. What took Sherman from his shoemaker's seat, gave him a seat in Congress, and there made his voice to be heard among the wisest and best of his compeers? Knowledge. What raised Simpson from the weaver's loom, to be placed among the first mathematicians; and Herschel from being a poor fifer's boy in the army, to a station among the first astronomers? Knowledge. It is the philosopher's stone—the true alchymy that turns every thing it touches into gold. It is the scepter that gives us our dominion over nature; the key that unlocks the stores of creation and opens to us the treasures of the universe.

MARRIAGE.—Marriage is to a woman at once the happiest and the saddest event of her life; it is the promise of future bliss, raised on the death of all present enjoyment. She quits her home, her parents, her companions, her occupations, her amusements, every thing on which she has hitherto depended for comfort, for affection, for kindness, for pleasure. The parents by whose advice she has been guided, the sister to whom she has dared impart every embryo thought and feeling, the brother who has played with her, by turns the counsellor and the counselled, and the younger children, to whom she has hitherto been the mother and the playmate, all are to be forsaken at one tell stroke; every former tie is loosened, the spring of every hope and action is to be changed; and yet she flies with joy into the untrodden path before her; buoyed up by the confidence of requited love, she bids a fond and grateful adieu to the life that is past, and turns with excited hopes and joyous anticipation of the happiness to come. Then wo to the man who can blight such fair hopes—who can treacherously lure such a heart from its peaceful enjoyment, and the watchful protection at home—who can coward-like, break the illusions that have won her, and destroy the confidence which love had inspired. Wo to him who has too early withdrawn the tender plant from the props and stays of moral discipline in which she has been nurtured, and yet make no effort to supply their place; for on him be the responsibility of her errors—on him who has first taught her, by his example, to grow careless of her duty, and then exposed her with a weakened spirit, and unsatisfied heart, to the wide storms and the wily temptations of a sinful world.

WINTER.—The Poet, describing winter, and viewing the veil of sadness which had fallen upon nature, says, with perfect beauty and symphony,

'How dead the vegetable kingdom lies—
How dumb the tuneful!'

And no one can look upon the naked branches of the trees of the wood, nor walk the fields without feeling its exact truth and justness. Look around you, and truly, one says to himself, "how dead the vegetable kingdom lies—how dumb the tuneful!"—*Village Record.*